

Programmatic Activity Report U SCAL - University of Southern California ->

Editor: Jennifer Robbins

Activity Information

Activity Type:	Programmatic Desk Review (Off-site)	Activity Date:	04/01/2006
Report Date:	12/04/2006	Closed Date:	12/04/2006
Report Attachment:	See below.		
Additional Notes & Grant Data:			

Grant Reviewed:

Grant No (1st 8 positions): 83186101

Project Description: To apply innovative mechanistic, epidemiologic, and community-based participatory research methods to address concerns regarding the links between air pollution and childhood airway disease in the Los Angeles Basin.

IGMS Post-Award Tracking Document ==> [Post-Award Tracking](#)

Program Synopsis

1. Is payment history consistent with progress to date?	Yes
Explanation:	
2. Is the work under the agreement on schedule?	Yes
Explanation:	
3. Is the actual work being performed within the scope of the recipients workplan?	Yes
Explanation:	
4. Are the recipient's staff and facilities appropriate to handle the work under the agreement.	Yes
Explanation:	
5. Are the products/progress reports submitted on time?	Yes
Explanation:	
6. Are the products/progress reports acceptable?	Yes
Explanation:	
7. Is the recipient making adequate progress in achieving outcomes and outputs and associated milestones in the assistance agreement work plan?	Yes
Explanation:	
8. If the recipient is experiencing significant problems meeting agreed-upon outcomes and outputs, has the recipient been required to develop and implement a corrective action plan?	N/A
Explanation:	
9. Has the recipient complied with the programmatic terms and conditions on the award?	Yes
Explanation:	
10. Did the recipient purchase equipment as planned in the agreement?	N/A
Explanation:	
11. Has the equipment been used as planned in the agreement?	N/A
Explanation:	

Attach Other Documentation Here:

EPA Office of Research and Development National Center For Environmental Research Research Progress Evaluation Report

Background

On-Site Evaluation: (yes or no): No

Off-Site Evaluation(yes or no): Yes

Date(s) of On-Site Evaluation/Off-Site Evaluation: 04/01/2006

Report Date: 12/04/2006

Project Officer (Contact): Nigel Fields

Principal Investigator: Frank Gilliland

Recipient Organization: University of Southern California

Grant Number / Cooperative Agreement Number: R831861

Project Title: USC/UCLA Children's Environmental Health Center

Solicitation/RFA Year: Centers for Children's Environmental Health and Disease Prevention Research (2003)

Introduction, Background and Methodology:

The USC Children's Environmental Health Center (CEHC) promotes air pollution research and risk management strategies across disciplines and institutions. The Center investigators aim to rigorously evaluate the role of chronic oxidative and nitrosative stress on respiratory illnesses in children from 13 communities in Southern California. The CEHC is composed of the following four integrated research and outreach projects: (1) a community-based participatory research model to investigate the involvement of particulate matter, oxidants and nitrosants on early life asthma; (2) a mechanistic investigation to understand and characterize the genes and enzymatic activity which regulate children's immuno-respiratory responses to air pollution; (3) an epidemiologic project to evaluate the use of exhaled nitric oxide (eNO) as a marker for high ambient air pollution exposure and increased risk of new onset asthma; and (4) a community outreach and translation core to translate research findings for study participants, community partners, and local level policy makers.

Results of Review with Recommendations (success and findings):

Site Visit Location: Annual Children's Center Director's Progress Review Meeting, San Francisco, CA

Over the past 8 years, since its beginnings in 1998, the USC/UCLA Children's Center has made essential contributions in three major scientific and translational arenas:

- 1) Identifying clinically significant adverse effects of ambient air pollution on children's respiratory health;
- 2) Demonstrating that common genetic variants are major contributors to children's susceptibility to environmental stressors; and
- 3) Inserting environmental health effects as an essential element in decision-making for urban planning and regional economic development in Southern California.

1. Chronic Adverse Effects Of Ambient Air Pollution On Children' Respiratory Health

Center investigators have observed that children exposed to elevated levels of ambient air pollutants including ozone, PM, NO₂ and fresh traffic-related emissions show clinically important adverse effects on asthma pathogenesis, lung function development, respiratory symptoms and infections (REFS). The quality and timeliness of the large, long-term cohort studies that facilitate these findings were greatly enhanced by support through the Center

mechanism. The original studies were designed to exploit variation in regional patterns and levels of pollution. The investigators soon recognized that exposures varied within communities as well and that local traffic patterns played a critical role in human exposure levels. With the development of sophisticated statistical techniques plus the advancement of exposure assessment technology, the research team was able to identify independent adverse pulmonary effects from both regional and local pollution.

2. Demonstrating that Common Genetic Variants are Major Contributors to Children's Susceptibility to Environmental Stressors

Research results from the first funding cycle suggested that glutathione-s-transferases M1 (GSTM1) and P1 (GSTP1) are involved in airway antioxidant defenses, and that they might mediate sensitivity to diesel exhaust particles. The current Center builds upon this hypothesis directly through collaboration between the mechanistic/basic science project led by David Diaz-Sanchez and the genetic epidemiology project, led by Frank Gilliland. This team now reports that individuals with *GSTM1* null or the *GSTP1* I105 wildtype genotypes show greatly enhanced nasal allergic responses in the presence of diesel exhaust particles. This study demonstrates that *GSTM1* and *GSTP1* modify the adjuvant effect of diesel exhaust particles on allergic inflammation.

3. Inserting Environmental Health Effects as an Essential Element for Decision-Making in Urban Planning and Regional Economic Development in Southern California

Air pollution, respiratory effects and children and goods movement have been the key issues that the CEHC has focused on scientifically as well as in the Community Outreach and Translation Core (COTC). The two primary community partners in the center are also actively involved with the COTC efforts, as their interests closely match those of the research in the CEHC. Earlier this year the community partners teamed with the community outreach program to successfully obtain a grant totaling \$660,000 direct costs from the California Endowment called "The Health, Trade and Cargo Collaborative Project: A Collaboration to Address Health Impacts of Global Trade on Southern California."

Equipment Issues: No major equipment purchases are budgeted for this grant

Personnel Issues: There are no changes in key investigators

Financial/Expenditure Issues: Funds are being spent at a rate that is appropriate for the progress of the grant.

Programmatic Terms and Conditions: The research teams continues to satisfactorily meet their T & Cs for this grant award. Their most recent progress report was timely submitted in September. Their 4th year increment has been awarded.

QA/QC: I am satisfied that the QA/AC procedures are in place and are being followed for this project

Resolution Plan and Timing:

None.

Findings

- | | | |
|---|--|---|
| <input checked="" type="checkbox"/> None | <input type="checkbox"/> Payroll Problems | <input type="checkbox"/> Property Management Findings |
| <input type="checkbox"/> Possible Conflict of Interest | <input type="checkbox"/> No Travel Policy | <input type="checkbox"/> Indirect Costs Issues |
| <input type="checkbox"/> Possible Lobbying | <input type="checkbox"/> Undocumented Cost Share | <input type="checkbox"/> Labor Distribution Findings |
| <input type="checkbox"/> No Accounting Manual | <input type="checkbox"/> Internal Controls Missing | <input type="checkbox"/> Cash Management |
| <input type="checkbox"/> No Written Procurement Procedures | <input type="checkbox"/> Progress Reports | <input type="checkbox"/> Subrecipient/Contract Monitoring |
| <input type="checkbox"/> No Procurement Conflict of Interest Policy | <input type="checkbox"/> Program Income | <input type="checkbox"/> Results not being achieved |
| <input type="checkbox"/> No Cost or Price Analysis | <input type="checkbox"/> Quality Assurance | <input type="checkbox"/> Environmental Results Findings |
| <input type="checkbox"/> Commingling of Funds | <input type="checkbox"/> A-133 Audit | <input type="checkbox"/> Other / please explain in below text area. |
| <input type="checkbox"/> Unallowable Costs | <input type="checkbox"/> Noncompliance with Terms and Conditions | |

Explanatory Text:

Action Against Recipient:

- | | |
|--|---|
| <input checked="" type="checkbox"/> No Action Required | <input type="checkbox"/> IG Referral |
| <input type="checkbox"/> Recipient Placed on Reimbursement | <input type="checkbox"/> On-Site Referral |
| <input type="checkbox"/> Special Award Terms and Conditions (attach below) | <input type="checkbox"/> Internal EPA Corrective Action Required (attach specifics below) |
| <input type="checkbox"/> Stop Work Issued | <input type="checkbox"/> Other Remedies (attach specifics below) |
| <input type="checkbox"/> Award (s) Terminated | |

Specifics: (Enter or attach additional information as needed.)

Validation Information

Validation Date:	Validated By:
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Recipient Point of Contact

Project Manager:	Frank Gilliland
Title:	
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Zip:	
Other Recipient Info/Comments:	

EPA Contact Information

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Other Participants:	Nigel Fields	